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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,988	12/28/2001	Thomas H. DiStefano	TESSERA 3.0-146 DIV	9840
530	7590	07/12/2005	EXAMINER	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			NORRIS, JEREMY C	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/033,988

Applicant(s)

DISTEFANO ET AL.

Examiner

Jeremy C. Norris

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,8,13 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 is/are allowed.
- 6) ☒ Claim(s) 1,5,7,8,13,19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 5, 7, 8, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by US 5,613,861 (Smith).

Smith discloses, referring primarily to figures 10-13, a connection component for a microelectronic element assembly, said component comprising: A. a support structure having a dielectric layer (14), a plurality of first regions (near reference 13), a second region (near reference 3), and a top surface, wherein the top surface is defined by the plurality of first regions and the second region; B. a plurality of leads (16) disposed on the top surface of said support structure, each of said leads having a terminal end permanently connected to the second region; and a tip end (11) associated with one of the plurality of first regions, disposed over the associated first region, and offset from the terminal end; and C. a plurality of release interfaces (13), each of said release interfaces corresponding to one of said plurality of leads, located between the tip end of the corresponding lead and the associated first region of said support structure, and

Art Unit: 2841

formed by locally heating the tip end of the corresponding lead (see col. 7, line 60 – col. 8, line 5) [claim 5].

Similarly, Smith discloses, referring primarily to figures 10-13, a connection component for a microelectronic element assembly, said component comprising: A. a support structure having a dielectric layer (14), a plurality of first regions (near reference 13), a second region (near reference 3), and a top surface, wherein the top surface is defined by the plurality of first regions and the second region; B. a plurality of leads (15) disposed on the top surface, each of said leads having a terminal end permanently connected to the second region; and a tip end (11) associated with one of the plurality of first regions, disposed over the associated first region, and offset from the terminal end; and C. a plurality of release interfaces (13), each of said release interfaces corresponding to one of said plurality of leads, located between the tip end of the corresponding lead and the associated first region of said support structure, and formed by depositing a heat susceptible material on each of the plurality of first regions (see col. 7, line 60 – col. 8, line 5) [claim 7].

Additionally, Smith discloses, referring primarily to figures 10-13, a connection component for a microelectronic element assembly, said component comprising: A. a support structure having a dielectric layer (14), a plurality of first regions (near reference 13), a second region (near reference 3), and a top surface, wherein the top surface is defined by the plurality of first regions and the second region; B. a plurality of polymer layers (13 see col. 7, line 65 – col. 8, line 5), each of said polymer layers being associated with one of said plurality of first region, disposed over the associated first

Art Unit: 2841

region, and comprised of a polymer, wherein the plurality of polymer layers is formed by depositing the polymer over the plurality of first regions; and C. a plurality of leads disposed on the top surface, each of said leads having a terminal end permanently connected to the second region; and a tip end associated with one of the plurality of polymer layers, releasably attached to the associated polymer layer, and offset from the terminal end; wherein the second regions is free of said polymer [claim 8]. Examiner notes that the limitation that the polymer layer be formed by "electrophoretically depositing the polymer" is a process limitation in a device claim and is thus only considered to the extent that said process impacts the structure of the device. Moreover, it is well settled that even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claims unpatentable even though the prior product was made by a different process. *In re Thorpe*, 77 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir 1985).

Furthermore, Smith discloses, referring primarily to figures 10-13, a connection component for a microelectronic element assembly, said component comprising: A. a support structure having a dielectric layer (14), a plurality of first regions (near reference 13), a second region (near reference 3), and a top surface, wherein the top surface is defined by the plurality of first regions and the second region; B. a plurality of conductive layers (13), wherein each of the conductive layers is associated with one of the plurality of first regions, disposed on the associated first region, and comprised of a first

Art Unit: 2841

conductive material (low temperature solder, see col. 7, line 65 – col. 8, line 5); and C. a plurality of leads (15) formed on the second region and the plurality of conductive layers, each of the leads having a terminal end connected to the second region; and a tip end (11) associated with one of the plurality of conductive layers, connected to the associated conductive layer, offset from the terminal end, and comprised of a second conductive material; wherein the melting point of the second conductive material is higher than the melting point of the first conductive material (see col. 4, lines 35-45) [claim 13].

Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by US 4,615,573 (White).

White discloses, referring to figures 2 and 3B, a connection component for a semiconductor assembly, said component comprising: A. a support structure (11) having a dielectric layer and a top surface; B. a plurality of first bonding pads (16) disposed on the top surface; wherein each first bonding pad is comprised of a first conductive material; C. a plurality of second bonding pads (18) disposed on the top surface, wherein each of the second bonding pads is associated with one of the first bonding pads and is comprised of a second conductive material; and D. a plurality of leads (14), wherein each lead has a terminal end permanently connected to one of the plurality of first bonding pads; and a tip end connected to the associated second bonding pad and offset from the terminal end; wherein the permanent connection

Art Unit: 2841

between the terminal end and the first bonding pad is stronger than the connection between the tip end and the associated second bonding pad [claim 19].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,280,139 (Suppelsa) in view of US 3,997,486 (Moore).

Suppelsa discloses, referring to figures 1 & 2, a connection component for a microelectronic element assembly, said component comprising: a support structure having a dielectric layer (12), a plurality of first regions, a second region, and a top surface, wherein the top surface is defined by the plurality of first regions and the second region', a plurality of adhesion promoter regions, each of said adhesion promoter regions being associated with one of said plurality of first regions, disposed over the associated first region, and comprised of an adhesion promoter (14) a plurality of leads (16) disposed on the dielectric layer, each of said leads having a terminal end associated with one of said plurality of adhesion promoter regions and permanently connected to the associated adhesion promoter region, and a tip end (18) releasably attached to the second region and offset from the terminal end; and D. a plurality of release interfaces, each of said release interfaces being associated with a tip end, wherein each of said release interfaces is located between the associated tip end and the second region of the support structure and wherein each of said release interfaces is free of the adhesion promoter (see col. 2, lines 15-45). Suppelsa does not specifically state that the adhesion promoter is organic [claim 1]. Instead, Suppelsa teaches using a chromium-based adhesive (see col. 2, lines 20-25). Moore teaches an organic chromium-based adhesive for bonding metals to organic substrates (see col. 3, lines 25-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use the organic polymer-chromium complex taught by



Art Unit: 2841

Moore as the adhesive in the invention of Supplea. The motivation for doing so would have been to improve the bonding of the resin substrate to the conductive runner, making the device more reliable. Moreover, the modified invention of Supplea teaches that organic adhesion promoter comprises acrylic adhesive (see Moore col. 5, lines 30-45) [claim 20].

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 5, 7, 8, 13, and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

The indicated allowability of claims 7, 8, and 13 is withdrawn in view of the newly discovered reference(s) to US 5,613,861 (Smith). Rejections based on the newly cited reference(s) are stated above.

Claim 18 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: Claim 18 states the limitation "a plurality of graphite regions disposed over the plurality of first regions, each of said plurality of graphite regions associated with one of said plurality of first regions and prepared by depositing graphite over the associated first region. This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art.

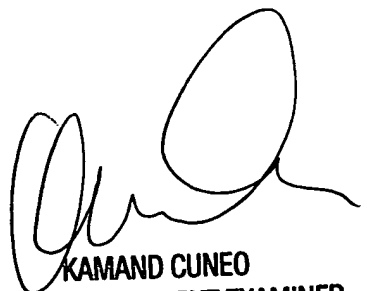
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCSN



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